

CLAIM LISTING:

1. (Currently amended) A method for analyzing the operation of a media distribution device, the method comprising:

- determining whether a network connection is functional;
- examining a memory of the media distribution device for a first diagnostic agent;
- determining whether the first diagnostic agent is functional, in response to a determination that the network connection is functional;
- if the first diagnostic agent is functional;
 - causing the first diagnostic agent, residing on the media distribution device, to collect diagnostic data associated with the media distribution device and diagnostic data associated with a second device not physically connected to the media distribution device, in response to a determination that the first diagnostic agent is functional;
 - analyzing the diagnostic data to determine an operational problem associated with the media distribution device and with the second device not physically connected to the media distribution device; and
 - receiving a command in the first diagnostic agent to perform at least one of upgrading an operating system in the media distribution device and performing a remedial action related to the network connection, in response to a determination that the network connection is not functional; and
- if the first diagnostic agent is not functional;
 - uploading a second diagnostic agent to the media distribution device, in response to a determination that the first diagnostic agent is not functional; and
 - removing the ~~second~~-first diagnostic agent from the media distribution device.

2. (Previously presented) The method of Claim 1 further comprising the step of uploading the first diagnostic agent to the media distribution device over an alternative network connection, in response to a determination that the network connection is not functional.

3. (Canceled)

4. (Original) The method of Claim 1 further comprising the step of remedying the operational problem.

5. (Previously presented) The method of Claim 4 further comprising the step of uploading a second diagnostic agent to the media distribution device, in response to a determination that the network connection is not functional.

6. (Currently amended) A diagnostic tool for remotely analyzing and diagnosing the performance of a media distribution device, comprising:

- a data adapter operative to maintain a communication link between the media distribution device and a media distribution service provider;

- a first intelligent diagnostic agent residing in the media distribution device and operative to collect diagnostic data associated with the media distribution device and diagnostic data associated with a second device not physically connected to the media distribution device; and

- a diagnostic service center operative to communicate with the first intelligent diagnostic agent over the communication link to retrieve the diagnostic data, to determine whether the communication link is functional, and to determine a performance problem associated with the media distribution device and with the second device not physically connected to the media distribution device;

wherein the diagnostic service center uploads the first intelligent diagnostic agent to the media distribution device in response to detecting the performance problem;

wherein the first intelligent diagnostic agent receives a first command to enter an identification of the media distribution device in a service log for a subsequent arrangement for an on-site technical service call;

wherein the first intelligent diagnostic agent receives a second command to perform at least one of upgrading an operating system in media distribution device and performing a remedial action related to the communication link, in response to a determination that the first intelligent diagnostic agent is functional and that the communication link is not functional; and

wherein the diagnostic service center removes the first intelligent diagnostic agent when the first intelligent diagnostic is not functional, and uploads a second intelligent diagnostic agent in response to the first intelligent diagnostic not being functional.

7. (Canceled)
8. (Original) The diagnostic tool of Claim 6, wherein the media distribution device is a set-top box.
9. (Original) The diagnostic tool of Claim 6, wherein the intelligent diagnostic agent is a program module residing in a system memory of the media distribution device.
10. (Original) The diagnostic tool of Claim 9, wherein the intelligent diagnostic agent is executable in the system memory.
11. (Canceled)
12. (Previously presented) The diagnostic tool of Claim 6, wherein the diagnostic service center can determine whether the diagnostic agent is functional.
13. (Previously presented) The diagnostic tool of Claim 6, wherein the diagnostic service center can replace the diagnostic agent with a substitute diagnostic agent, in response to a determination that the diagnostic agent is not functional.
14. (Original) The diagnostic tool of Claim 6, wherein the communication link is broadband connection.
15. (Original) The diagnostic tool of Claim 14, wherein the communication link is an asymmetric digital subscriber line.
16. (Original) The diagnostic tool of Claim 6, wherein the communication link is a satellite connection.
17. (Original) The diagnostic tool of Claim 6, wherein the diagnostic service center is further operative to remedy the performance problem.
18. (Original) The diagnostic tool of Claim 17, wherein the diagnostic service center is further operative to remedy the performance problem by uploading a replacement program module to a system memory of the media distribution device.
19. (Previously presented) The diagnostic tool of Claim 17, wherein the diagnostic service center is further operative to remedy the performance problem by establishing a secondary communication link between the media distribution device and the media distribution service provider.

20. (Currently amended) A self-diagnosing media distribution system, comprising:
- a media distribution service provider operative to transmit a media content stream to a media distribution device;
 - a diagnostic service center for communicating with the media distribution device to retrieve diagnostic data from the media distribution device, to determine whether a communication link between the media distribution device and the media distribution service provider is functional, and to send remedial data to the media distribution device; and
 - a first intelligent diagnostic agent residing in the media distribution device and operative to collect diagnostic data associated with the media distribution device and diagnostic data associated with a second device not physically connected to the media distribution device, and to transmit the diagnostic data to the diagnostic service center during off-peak hours of operation for the media distribution device, wherein the first intelligent diagnostic agent is uploaded to the media distribution device in response to detecting a performance problem with the media distribution device and with the second device not physically connected to the media distribution device;
- whereby the performance problem associated with the media distribution device can be remotely remedied; and
- wherein the first intelligent diagnostic agent receives a command to perform at least one of upgrading an operating system in the media distribution device and performing a remedial action related to the communication link, in response to a determination that the communication link is not functional; and
- wherein the diagnostic service center removes the first intelligent diagnostic agent when the first intelligent diagnostic is not functional, and uploads a second intelligent diagnostic agent in response to the first intelligent diagnostic not being functional.

21. (Currently amended) A computer program product comprising a computer-readable medium having control logic stored therein for causing a computer to analyze the operation of a media distribution device, the control logic comprising computer-readable program code for causing the computer to:

- determine whether a network connection is functional;
- upload a first diagnostic agent via the network connection;
- determine whether the first diagnostic agent, residing on the media distribution device, is functional, in response to a determination that the network connection is functional;

- if the first diagnostic agent is functional;
 - cause the first diagnostic agent to collect diagnostic data associated with the media distribution device and diagnostic data associated with a second device not physically connected to the media distribution device, in response to a determination that the first diagnostic agent is functional;
 - analyze the diagnostic data to determine an operational problem associated with the media distribution device; and
 - receive a command in the first diagnostic agent to perform at least one of upgrading an operating system in the media distribution device and performing a remedial action related to the network connection, in response to a determination that the network connection is not functional;
- and

- if the first diagnostic agent is not functional;
 - upload a second diagnostic agent to the media distribution device, in response to a determination that the first diagnostic agent is not functional; and
 - remove the first ~~and second~~ diagnostic agent from the media distribution device.

22. (Previously presented) The computer program product of Claim 21, further comprising computer-readable program code for causing the computer to upload the first diagnostic agent to the media distribution device over an alternative network connection, in response to a determination that the network connection is not functional.

23. (Canceled)

24. (Previously presented) The computer program product of Claim 21, further comprising computer-readable program code for causing the computer to remedy the operational problem.

25. (Currently Amended) An intelligent diagnostic agent residing in a media distribution device within a self-diagnosing media distribution system, the intelligent diagnostic agent operative to:

collect diagnostic data associated with the media distribution device and diagnostic data associated with a second device not physically connected to the media distribution device;

transmit the diagnostic data to a diagnostic service center; and

wherein the diagnostic service center is operative to communicate with the media distribution device to determine whether a communication link between the media distribution device and a media delivery service provider is functional and is further operative to communicate with the intelligent diagnostic agent over the communication link to retrieve the diagnostic data, to determine a performance problem associated with the media distribution device and with the second device not physically connected to the media distribution device, and to send remedial data to the media distribution device; and

wherein the intelligent diagnostic agent is uploaded to the media distribution device in response to detecting a performance problem and wherein the intelligent diagnostic agent receives a command to perform at least one of upgrading an operating system in the media distribution device during off-peak hours of operation for the media distribution device, and

performing a remedial action related to the communication link, in response to a determination that the communication link is not functional; and

wherein the intelligent diagnostic agent is removed from the media distribution device when a determination is made that the intelligent agent is not functional.

26. (Currently amended) A method of diagnosing media service delivery troubles to a remote site, the method comprising:

detecting that at least one communication path is at least partially inoperable between a central service center and the remote site;

detecting an occurrence of a trouble-shooting condition that indicates at least one troubleshooting action should be performed;

conveying at a first diagnostic software agent over at least one interface responsive to at least detecting the occurrence of the trouble-shooting condition, the first

diagnostic software agent capable of being executed by a media distribution device at the remote site, wherein the first intelligent diagnostic agent receives a

first command to enter an identification of the media distribution device in a service log for a subsequent arrangement for an on-site technical service call,

wherein the first diagnostic software agent receives a command to perform at least one of upgrading an operating system in the media distribution device, performing a first remedial action related to the network connection, and performing a second remedial action related to a performance problem with both the media distribution device and a hub located at the remote site and not physically connected to the media distribution device, in response to a determination that the network connection is not functional; and

determining that the first diagnostic software agent is not functional;

deleting the first diagnostic software agent from the media distribution device at the remote site, in response to the first diagnostic software agent not being functional.

27. (Previously presented) The method of claim 26, prior to deleting the first diagnostic software agent further comprising conveying a second diagnostic software agent in response to detecting that the diagnostic software agent is not operational on the media distribution device at the remote site.

28. (Canceled)

29. (Previously presented) The method of claim 26, wherein the first diagnostic software agent is conveyed between the central service center and the remote site over at least one second communication path.

30. (Previously presented) The method of claim 29, wherein the at least one second communication path comprises a wireless link.
31. (Previously presented) The method of claim 30, wherein the wireless link comprises satellite communication.
32. (Previously presented) The method of claim 26, wherein code related to the first diagnostic software agent is stored in the media distribution device at the remote site for diagnostic testing and is later removed to conserve memory resources of the at least one device.
33. (Previously presented) The method of claim 26, wherein the first diagnostic software agent is interactive with a customer through a presentation device.
34. (Previously presented) The method of claim 1, further comprising the step of entering identification of a media distribution device in a service log.
35. (Previously presented) The method of claim 34, wherein entering the identification of the media distribution device is performed autonomously by the diagnostic agent.
36. (Previously Presented) The method of claim 1, further comprising:
 - presenting a user interface over the media presentation device; and receiving input from a user via the user interface.